

mixing refractory ceramic fibers (RCFs) with a solution of inorganic binder to form a thick paste slurry, molding said thick paste slurry into an open box shape fireplace having a plurality of panels comprising a floor panel, at least two side panels and a top panel, removing said open box fireplace from its mold, firing said panels to form a non-porous impact resistant open box of panels of a gas fireplace combustion chamber,

assembling stack means, trim means, burner means and said plurality of panels into the gas fireplace combustion chamber to provide said different gas fireplace units, and

sealing the joints between said stack means and said trim means, to form unique fireplace units having a reinforced non-porous gas tight gas combustion chamber.

2. A method as set forth in claim 1 wherein the step of sealing further comprises applying a binder which comprises an aqueous solution of inorganic binder.

3. A method as set forth in claim 2 which further includes the step of machining flanges on the box opening for attaching said trim means to at least one of said panels.

4. A method as set forth in claim 1 wherein said step of molding comprises providing an opening in at least one of said panels forming an exhaust stack aperture in said top or back panel.

5. A method as set forth in claim 4 wherein said step of assembling said burner means includes making an opening in at least one of said panels which comprises gas burner port apertures in said floor panel.

6. A method as set forth in claim 1 which further includes the steps of,

providing flanges on said top panel and said floor panel, providing flanges on said side panels, and

the step of assembling said fireplace further comprises attaching said trim means to said flanges and door means to said trim means to complete said non-porous gas tight combustion chamber.

7. A method as set forth in claim 1 wherein said open box shaped fireplace comprises at least one substantially flat steel back panels, and

overlapped the mating edges of said steel panel to other panels to form a gas tight heat exchanger panel.

8. A universal open box combustion chamber for use in a plurality of different types of fireplaces comprising,

a floor panel,

a top panel,

two side panels,

said floor panel, said top panel and said side panels each comprising a mixture of vitreous alumina silicate fibers and an aqueous solution of binder formed and dried after molding to provide a gas tight and impact resistant box of panels of a fireplace combustion chamber,

glass door means attached to said panels to provide a gas tight closed box fireplace, and

burner means supported by said floor panel.

9. A universal combustion chamber as set forth in claim 8 wherein said burner means is supported above said floor panel, and

apertures in said side and floor panels for connecting air and gas to said burner means.

10. A universal combustion chamber as set forth in claim 8 wherein said burner means comprises a single open U-shaped panel adapted to seal against said floor panel.

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11. A universal combustion chamber as set forth in claim 8 which further comprises a plurality of flat back panels sealed at their mating joints to other panels to form a gas tight combustion chamber.

12. A universal combustion chamber as set forth in claim 8 wherein said burner means comprises connecting panels having flat mating joints, and

a self hardening high temperature adhesive applied in said joints of said burner means to further assure a gas tight seal.

13. A universal combustion chamber as set forth in claim 11 which further includes corner reinforcing means attached to corners of said sidewall panels.

14. A method of making a universal gas combustion chamber for use as a component of a fireplace unit, comprising the steps of:

mixing vitreous alumina fibers with an aqueous solution of inorganic binder to form a thick castable slurry, forming said thick castable slurry on a forming mold to build up a desired predetermined thickness non-rigid fireplace combustion chamber having an open side for supporting door means and a floor for supporting a gas burner,

drying said formed combustion chamber on the mold to provide an uncured stiff one piece combustion chamber,

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heating said uncured one piece combustion chamber at firing temperature to form a rigid non-porous impact resistant combustion chamber ready for assembly of said door means and gas burner to form a unique fireplace.

15. The method as set forth in claim 14 which further
10 includes the steps of forming pluggable apertures in the
side or top panels for attachment of an exhaust stack.

16. The method as set forth in claim 14 which further includes the steps of supporting a gas burner unit on the floor panel, and

15 providing apertures in said fireplace unit through which
fresh air for combustion is conducted to said gas burner.

17. The method as set forth in claim 16 which further includes attaching door means to said open side of said
20 combustion chamber.

18. The method as set forth in claim 17 wherein the step of attaching door means comprises the step of sealing a glass door panel to the vertical and horizontal edges of said open side of said fireplace combustion chamber.

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